

What is claimed is:

- 1 1. A method of interactive image retrieval based on user-
2 specified regions, comprising:
3 providing a sample image;
4 dividing the sample image into a plurality of regions;
5 selecting one or more sample regions for feature extraction,
6 and defining corresponding logic operators; and
7 constructing a composite query instruction based on the
8 selected sample regions and their corresponding logic
9 operators and searching the image database according to the
10 composite query instruction.
- 1 2. The method as claimed in claim 1, comprising selecting the
2 images that contain the regions corresponding with the
3 composite query instruction.
- 1 3. The method as claimed in claim 1, wherein the step of
2 dividing the sample image into a plurality of regions uses a
3 edge detection method to divide the sample image into a
4 plurality of regions.
- 1 4. The method as claimed in claim 1, wherein the step of
2 dividing the sample image into a plurality of regions uses a
3 color quantization method to divide the sample image into a
4 plurality of regions.
- 1 5. The method as claimed in claim 1, wherein the step of

2 dividing the sample image into a plurality of regions uses a
3 region splitting and merging method to divide the sample image
4 into a plurality of regions.

1 6. The method as claimed in claim 1, wherein the step of
2 dividing the sample image into a plurality of regions uses a
3 region growing method to divide the sample image into a
4 plurality of regions.

1 7. The method as claimed in claim 1, wherein the image features
2 include color distribution, texture, position and shape.

1 8. The method as claimed in claim 1, wherein the image features
2 include tone, brightness and chromatic saturation.

1 9. The method as claimed in claim 1, wherein the logic operators
2 include "and", "or", "exclusive-or" and "not".

1 10. A method of interactive image retrieval based on user-
2 specified regions, comprising:

3 providing a sample image;

4 selecting one or more sample regions from the sample image
5 by a region selection tool and defining corresponding logic
6 operators between the selected regions;

7 extracting the image features of the selected sample
8 regions; and

9 constructing a composite query instruction based on the

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10 selected sample regions and their corresponding logic
11 operators and searching the image database according to the
12 composite query instruction.

1 11. The method as claimed in claim 10, comprising selecting
2 the images that contain the regions corresponding with the
3 composite query instruction.

1 12. The method as claimed in claim 10, wherein the image
2 features include color distribution, texture, position and
3 shape.

1 13. The method as claimed in claim 10, wherein the image
2 features include tone, brightness and chromatic saturation.

1 14. The method as claimed in claim 10, wherein the logic
2 operators include "and", "or", "exclusive-or" and "not".